AMMMENDMENTS TO THE CLAIMS

Claims 1, 3-17, 19-31, and 33-40 were pending at the time the Office Action was issued.

Claims 1, 10, 14, 27, and 37 have been amended.

Claims 3, 19, and 33 have been cancelled

Claims 1, 4-17, 20-31, and 34-40 remain pending

1.   (**Currently Amended**)   An apparatus configured to manage installation of operating systems on a plurality of computing devices, ~~wherein~~ the installation <u>being</u> ~~is~~ performed across the plurality of computing devices both concurrently and asynchronously, ~~wherein~~ the installation <u>comprising:</u> ~~comprises~~ transferring multiple portions of data to each of the plurality of computing devices, ~~and~~ wherein some of the multiple portions are transferred to the plurality of computing devices concurrently and other of the multiple portions are transferred to the plurality of computing devices asynchronously, ~~and~~ wherein the portions that are transferred to the plurality of computing devices asynchronously include one or more programs to be executed on the plurality of computing devices to configure the plurality of computing devices, <u>and wherein the portions that are transferred to the plurality of computing devices concurrently are larger than the portions transferred to the plurality of computing devices asynchronously</u> .

2.   (**Cancelled**).

3.   (Cancelled)

4.   **(Previously presented)**   An apparatus as recited in claim 1, wherein the portions that are transferred to the plurality of computing devices concurrently comprise an image of the operating system being deployed, and wherein the image of the operating system is transferred to the plurality of computing devices after the one or more programs are executed on the plurality of computing devices.

5.   **(Original)**   An apparatus as recited in claim 1, wherein installation of the operating systems is performed in multiple steps, and wherein the apparatus is configured to perform a first set of the multiple steps asynchronously across the plurality of computing devices, and, after a particular one of the multiple steps is completed, to perform one or more of the remaining steps of the multiple steps concurrently across the plurality of computing devices.

6.   **(Original)**   An apparatus as recited in claim 5, wherein the one or more remaining steps includes a step of downloading an operating system image to the plurality of computing devices.

7.   **(Original)**   An apparatus as recited in claim 1, wherein the apparatus further comprises:

a controller to maintain a record of the plurality of computing devices being managed by the apparatus;

a network boot service to control how the plurality of computing devices are to boot; and

an image distribution service to store one or more operating system images that can be installed as the operating system for one or more of the plurality of computing devices.

8.   **(Original)**   An apparatus as recited in claim 1, wherein the apparatus further comprises a network boot service to:

receive, from one of the plurality of computing devices, information describing hardware installed on the computing device; and

use the received information to generate a deployment agent to be downloaded to the computing device and used to install the operating system on the computing device.

9.   **(Original)**   An apparatus as recited in claim 1, wherein the installation comprises maintaining a record of what operations are performed when installing the operating systems on the plurality of computing devices.

10.   **(Currently Amended)**   A method of deploying an operating system on a plurality of computing devices, the method comprising:

performing a first portion of an installation process on each of the plurality of computing devices asynchronously across the plurality of computing devices, wherein performing the first portion comprises downloading one or more programs to each of the plurality of computing devices to be executed on the

plurality of computing devices to configure the plurality of computing devices; and

performing a second portion of the installation process on each of the plurality of computing devices concurrently, <u>wherein the portion that is transferred to the plurality of computing devices concurrently is larger than the portion transferred to the plurality of computing devices asynchronously</u>.

11.   **(Original)**   A method as recited in claim 10, wherein performing the second portion comprises downloading an operating system image to the plurality of computing devices.

12.   **(Previously presented)**   A method as recited in claim 10, wherein performing the first portion further comprises:

downloading a deployment agent loader to obtain, from each of the plurality of computing devices, information describing hardware installed on each of the plurality of computing devices; and

downloading, to each of the plurality of computing devices, a deployment agent, wherein the deployment agent downloaded to a particular computing device is generated based on the received information regarding the particular computing device.

13.   (**Original**)   A method as recited in claim 10, further comprising adding an indication of the installation process performed on each of the plurality of computing devices to a log.

14.   (**Currently Amended**)   One or more computer readable media having stored thereon a plurality of instructions that, when executed by one or more processors, causes the one or more processors to:

receive, from each of a plurality of computing devices, an indication that the computing device is to have an operating system installed on the computing device;

for each of the plurality of computing devices, identify, in response to receiving the indication, a set of steps to be taken in order to install an operating system on the computing device; and

control installation of the operating systems on the plurality of computing devices asynchronously and in parallel, wherein the installation comprises transferring multiple portions of data to each of the plurality of computing devices, and wherein some of the multiple portions are transferred to the plurality of computing devices in parallel and other of the multiple portions are transferred to the plurality of computing devices asynchronously, and wherein the portions that are transferred to the plurality of computing devices asynchronously include one or more programs to be executed on the plurality of computing devices to configure the plurality of computing devices, and wherein the portions that are

transferred to the plurality of computing devices in parallel are larger than the portions transferred to the plurality of computing devices asynchronously.

15. **(Original)** One or more computer readable media as recited in claim 14, wherein the indication that the computing device is to have an operating system installed is an indication that the computing device has been powered-on.

16. **(Original)** One or more computer readable media as recited in claim 14, wherein one or more of the plurality of computing devices currently has no operating system installed.

17. **(Original)** One or more computer readable media as recited in claim 14, wherein one or more of the plurality of computing devices currently has an operating system installed.

18. **(Canceled)**

19. **(Canceled)**

20. **(Previously presented)** One or more computer readable media as recited in claim 14, wherein the portions that are transferred to the plurality of computing devices in parallel comprise an image of the operating system being deployed.

21. **(Original)** One or more computer readable media as recited in claim 14, wherein the instructions cause the one or more processors to perform multiple steps of the set of steps asynchronously across the plurality of computing devices, and, after a particular one of the set of steps is completed, to perform one or more of the remaining steps of the set of steps in parallel across the plurality of computing devices.

22. **(Original)** One or more computer readable media as recited in claim 21, wherein the one or more remaining steps includes a step of downloading an operating system image to the plurality of computing devices.

23. **(Original)** One or more computer readable media as recited in claim 14, wherein the plurality of instructions further cause the one or more processors to:

receive, from one of the plurality of computing devices, information describing hardware installed on the computing device; and

use the received information to generate a deployment agent to be downloaded to the computing device and used to install the operating system on the computing device.

24. **(Original)** One or more computer readable media as recited in claim 14, wherein the set of steps includes steps of:

downloading a deployment agent loader to one of the plurality of computing devices;

receiving, from the deployment agent loader, information describing hardware installed on the one computing device;

dynamically generating a deployment agent for the one computing device based at least in part on the hardware installed on the one computing device; and

downloading the dynamically generated deployment agent to the one computing device.

25.   **(Original)**   One or more computer readable media as recited in claim 24, wherein the set of steps further includes:

downloading, in response to a request received from the deployment agent on the one computing device, an image of an operating system to the one computing device.

26.   **(Original)**   One or more computer readable media as recited in claim 14, wherein the plurality of instructions further cause the one or more processors to log, for each of the plurality of computing devices, the set of steps taken in order to install the operating system on the computing device.

27.   **(Currently Amended)**   A method comprising:

identifying, for each of a plurality of devices, a process to be followed to install an operating system on the device; and

controlling, in parallel and asynchronously, installation of the operating systems on the plurality of devices, wherein the installation comprises transferring multiple portions of data to each of the plurality of devices, and wherein some of

the multiple portions are transferred to the plurality of devices in parallel and other of the multiple portions are transferred to the plurality of devices asynchronously, ~~and~~ wherein the portions that are transferred to the plurality of computing devices asynchronously include one or more programs to be executed on the plurality of computing devices to configure the plurality of computing devices, and wherein the portions that are transferred to the plurality of devices in parallel are larger than the portions transferred to the plurality of devices asynchronously.

28.   (**Original**)   A method as recited in claim 27, wherein the same operating system is to be installed on each of the plurality of devices.

29.   (**Original**)   A method as recited in claim 27, wherein a different operating system is to be installed on at least a subset of the plurality of devices.

30.   (**Original**)   A method as recited in claim 27, wherein one or more of the plurality of devices currently has no operating system installed.

31.   (**Original**)   A method as recited in claim 27, wherein one or more of the plurality of devices currently has an operating system installed.

32.   (**Canceled**)

33.   (**Canceled**)

34.   (**Previously presented**)   A method as recited in claim 27, wherein the portions that are transferred to the plurality of devices in parallel comprise an image of the operating system being deployed.

35.   (**Original**)   A method as recited in claim 27, wherein the installation comprises performing a set of steps, and performing multiple steps of the set of steps asynchronously across the plurality of devices, and, after a particular one of the set of steps is completed, performing one or more of the remaining steps of the set of steps in parallel across the plurality of devices.

36.   (**Original**)   A method as recited in claim 35, wherein the one or more remaining steps includes a step of downloading an operating system image to the plurality of devices.

37.   (**Currently Amended**)   A system for deploying an operating system on a plurality of computing devices, the system comprising:

means for performing a first portion of an installation process on each of the plurality of computing devices asynchronously across the plurality of computing devices, wherein the means for performing the first portion comprises means for downloading one or more programs to each of the plurality of computing devices to be executed on the plurality of computing devices to configure the plurality of computing devices; and

means for performing a second portion of the installation process on each of the plurality of computing devices concurrently, <u>wherein the second portion of the installation process is larger than the first portion of the installation process</u>.

38.   **(Original)**   A system as recited in claim 37, wherein the means for performing the second portion comprises means for downloading an operating system image to the plurality of computing devices.

39.   **(Previously presented)**   An apparatus as recited in claim 1, wherein the one or more programs are executed on the plurality of computing devices to set one or more BIOS parameters on the plurality of computing devices.

40.   **(Previously presented)**   An apparatus as recited in claim 1, wherein the one or more programs are executed on the plurality of computing devices to set one or more RAID parameters on the plurality of computing devices.